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COGNITIVE ACCURACY AND JOB SATISFACTION IN THE TEACHING PROFESSION.

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THE OBJECT OF THIS THESIS WAS TO ESTABLISH A RELATIONSHIP WHICH WOULD SHOW INDICATIONS OF TEACHER SATISFACTION TO BE DIRECTLY PROPORTIONAL TO ACCURATE INTERPRETATION, OR COGNITION, OF NORMS AND EXPECTATIONS HELD BY PUBLIC SCHOOL OFFICIALS. DATA WERE DRAWN FROM A LARGER STUDY DONE BY BIDDLE AND ASSOCIATES IN 1961. IN A TEST SAMPLE OF 68 TEACHERS, A POSITIVE ANSWER TO THE PROPOSITION OF SELECTING THE SAME PROFESSION WAS CONSIDERED THE MAJOR INDICATION OF JOB SATISFACTION. BOTH A MANN-WHITNEY AND A SIGN TEST WERE USED TO EVALUATE THE FINDINGS. HOWEVER, NO SIGNIFICANT CAUSAL RELATIONSHIP COULD BE ESTABLISHED BETWEEN COGNITIVE ACCURACY AND TEACHER SATISFACTION. (PM)

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COGNITIVE ACCURACY AND JOB SATISFACTION IN THE TEACHING PROFESSION

A Thesis

Presented to

the Faculty of the Graduate School

University of Missouri

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Sue Titus

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Dr. Bruce J. Biddle, Thesis Supervisor

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CHAPTER I

INTRODUCTION

This thesis reports the results of a study of the relationship of cognitive accuracy and job satisfaction in the teaching profession. Public school teachers have certain conceptions of how school officials and the general public expect or want them to behave. These conceptions, however, are not always synonymous with the cognitions actually held by the positions to whom they are attributed. The purpose of this study was to compare the norms and expectations actually held by public school officials and people in general with the norms and expectations attributed to them by public school teachers and then to compare the disparity scores with the teachers' indications of job satisfaction. It was predicted that job satisfaction would be indicated more frequently by teachers who accurately attributed cognitions to public school officials, other teachers, and people in general than by teachers whose attributed cognitions were inaccurate.

Definition of Terms

As Reiman and Hughes (1951) pointed out in their summary of the literature from 1900-1950 which used the concept of "role," the concept has been used in many different ways and still is "rather vague, nebulous, and non-definitive." More recently,

Titus, Berger and Biddle (1961), in a study of the various methodological processes which have been used to measure roles, concluded that, "One of the most striking features of the empirical studies in role theory was the wide variation in terminology" (p.8). The same terms are used in describing different types of cognitions. Different investigators do not agree on role theory terminology, and some investigators are not even consistent in their own usage of terminology. It is therefore necessary for the role theory terms used in this study to be defined rather explicitly. The definitions will be based on those originally formulated by Biddle (1961).

A term which is basic to this study is that of cognition, which is defined as a map that an individual carries in his mind concerning any anticipated social interaction or characteristic of people. Two types of cognitions were measured in this study: first order and second order. A first order cognition is a cognition which an individual holds about the overt behavior of another person or group of persons. A second order cognition is a cognition which one person attributes to another person or position.

Two types of first order cognitions were measured in this study: norms and expectations. A norm is a statement of value about the behavior or characteristic of a person or position. For example, if a school official said, "I think teachers should not smoke during P.T.A. meetings," he would be expressing his norm

about that type of behavior. Norms may be positive (statements of approval) or negative (statements of disapproval).

An expectation is a belief concerning the behavior or characteristic most likely to be displayed by a person or position. For example, a school official might hold an expectation that most of the teachers in his school system do not smoke during P.T.A. meetings. This expectation may or may not be accurate, and it reveals nothing about the school official's values concerning the expected behavior. It is simply a statement of what he thinks is the pattern of behavior with regard to the particular situation in question.

Norms and expectations may be attributed to other persons or positions, in which case they are second-order cognitions. For example, the following statement made by a public school teacher would be an attributed expectation: "I think school officials expect teachers to maintain strict discipline in the classroom." The statement becomes an attributed norm when a value is placed in the attribution: "I think school officials approve of teachers' maintaining strict discipline in the classroom." Attributed norms may also be positive or negative. It should be remembered that these second order cognitions may or may not be accurate, but they are real to the person who holds them and will influence his behavior accordingly.

The term position has already been used several times in this paper. A position refers to a set of persons "who exhibit similar characteristics, who are treated similarly by others, or for whom a cluster of unique cognitions are maintained either by themselves or others" (Biddle, 1961, p.5).

Another dimension of role theory which is important in this study is that of person specification. The groups of persons distinguished are:

1. Subject - a person who holds a cognition which is measured. The subjects in this study were teachers.

2. Object - a person about whom cognitions are held, and/or a person who exhibits behavior.

3. Sentient-object - a person to whom cognitions are attributed.

The cognitions measured in this study concerned the behavior of public school teachers. A behavior is a specific, meaningful action taken by a particular individual. Behaviors are bounded by content and in this study were placed in hypothetical background specifications.

The condition of correctness between an individual's cognitions and the cognitions attributed to him by another person is referred to as accuracy. It was predicted that accuracy would be related to job satisfaction, another term which needs explanation.

Job satisfaction is a term which is frequently used and seldom defined. Hoppock (1935), in his classic study of job satisfaction, pointed out the difficulty in defining the term.

> To formulate an adequate definition of anything about which we know so little is an extremely difficult if not impossible task. As an independent variable job satisfaction may not even exist. And if it does, the final definition may have to be made in terms of physiological chemistry (p. 47).

Despite the complexity of the term, a definition is needed and Hoppock suggested the following:

> [Job satisfaction] is any combination of psychological, physiological, and environmental circumstances that causes a person truthfully to say, 'I am satisfied with my job' (p.47).

Hoppock realized that an individual might be satisfied with some phases of his job and dissatisfied with others. But he believed that:

> Through some psychological or physiological mechanism, most of us acquire a sort of vaguely defined attitude toward our total job situation. A multitude of satisfactions and dissatisfactions may, we assume, play upon each other to produce the composite attitude reflected in the statement, 'I am satisfied with my job' (p.48).

Milton Blum (1956) has pointed out that many factors enter into the concept of job satisfaction. He defines job satisfaction as "a general attitude which is the result of many specific attitudes in three areas, namely, specific job factors, individual characteristics, and group relationships outside the job" (p.124). It is an individual phenomenon and can be measured by determining specific attitudes of the person.

Thus, Hoppock and Blum both defined job satisfaction as a general (or composite) attitude held by an individual. But in accepting such a definition, some explanation of the concept of attitude is necessary.

An attitude is a hypothetical construct. It "does not refer to any one specific act or response of an individual, but is an abstraction from a large number of related acts or responses" (Green, 1954, p. 335). Krech and Crutchfield (1948, p. 152) have defined attitude as "an enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world." Thus, in defining job satisfaction as a general attitude, we are talking about a hypothetical construct, not a particular pattern of behavior. It is assumed, however, that an individual's attitude of job satisfaction (or dissatisfaction) can be determined by measuring his verbal responses to the phenomena whichoconstitute the attitude.

Review of Literature

A review of the literature indicates that many studies have been made of the role of the public school teacher, but most of the studies have measured only first order cognitions, and prior to the present project, none had measured cognitive accuracy. A brief summary of some of these studies indicates the need to measure cognitive accuracy which has so often been assumed or totally ignored.

Numerous studies have attempted to measure norms and expectations held by the "general public," school officials, parents and pupils for the behaviors of public school teachers. Examples of such studies are those of Cook and Almack (1939), Dallalio (1955), Davies (1933), Fishburn (1955), Greenhoe (1940), Haer (1953), Hanson (1937), Jordan (1929), Koopman (1946), and Terrien (1953). Four of these studies (Cook and Almack, Fishburn, Greenhoe, and Jordan) also measured norms and/or expectations which teachers hold for the position of public school teachers. Other studies by Callaway (1951), Cook, et al. (1938), Kline (1949), Lichliter (1946), Manviller (1958), Rogers (1950, 1953), Story (1959), and Terrien (1955-6), have measured expectations and norms about the role of the public school teacher which teachers have attributed to the "general public," or to school officials. Getzels and Guba (1955) measured the expectations about the role of the teacher attributed by teachers to other teachers in their school.

Some of these investigators did not even acknowledge the possibility of a disparity between attributed and actual cognitions. For example, in 1958 Manviller hypothesized that school officials and public school teachers would agree on the expectations which they attributed to the general public, and in the subsequent investigation his hypothesis was supported. But at that point his study stopped. He did not measure the actual expectations held by the community for the behavior of public school teachers. Indeed, he apparently did not consider the possibility that both the teachers

and the school officials, despite their agreement with each other in attributed expectations, could have been inaccurate in the expectations which they attributed to the community.

Some investigators have gone so far as to deny the probability of cognitive inaccuracy and have thus seen no need for measurement. Rogers (1956) measured the expectations about the "typical" school teacher attributed to the community by elementary school teachers and college students. But she did not measure the actual expectations of the community and make comparisons. According to Rogers, "There might be some discrepancy between what the public really thinks of teachers and what teachers believe they think. This difference is probably not great, because individual teachers receive daily evidence, in their many and varied dealings with the public, of how people feel about the teaching profession" (pp. 482-83).

Turrien (1955), in his study of the occupational roles of teachers, recognized the possibility of a lack of cognitive accuracy. He measured the expectations about teacher behavior which teachers attributed to the community and concluded that, "The teachers were only uncertainly aware of what sanctions the community placed on them or would be likely to exercise. . .Teachers conceive of themselves as loyal, non-aggressive, somewhat martyred public servants. They appear to differ from the average American in that they lack a really positive conception of self" (p. 30). The main criticism of Turrien's study is that he had no measure of cognitive accuracy. He

merely assumed that teachers were inaccurate in the cognitions they attributed to the community.

In 1955, Brookover pointed out the need to study the divergence between the group's role expectations and the teachers' definition of the role. He intimated that the discrepancy between these two might, in many cases, be the cause of unhappiness of both teachers and administrators.

> The numerous unhappy teachers and administrators as well as board members and parents suggest that an understanding of the divergence between the community's role expectation and the teacher's definition of them is essential. We have no satisfactory studies of factors relating to divergence between role expectation and the teacher's definition; neither do we know the means by which such divergence can be resolved in the interaction process (p.11).

Although he did not correlate cognitive accuracy with job satisfaction, Bidwell (1955) did study job satisfaction in the teaching profession as it related to the teacher's ability to predict accurately the behavior of the administrators. His study, however, was based on a sample which was neither random nor representative. He did find support for three of his hypotheses, two of which are important to this study:

> 1. Convergence of teachers' role-expectations toward the administrator and their perceptions of his behavior will be accompanied by an expression by these teachers of satisfaction with the teaching profession.
>
> 2. Divergence of teachers' role-expectations toward the administrator and their perceptions of his behavior will be accompanied by an expression by these teachers of dissatisfaction with the teaching situation (p.42).

Maholl's study is important because the theory from which he derived these two hypotheses is also applicable to our study and consequently will be discussed in the following section.

Theory

Motivations for behavior

In this study it was assumed that most people attempt to relate themselves to other people in ways which bring social approval and social recognition, especially when the future of their job is involved. Various studies have indicated this tendency of people to conform to the norms and expectations attributed to persons whose approval they desire. Shaffer and Shoben, in their book Psychology of Adjustment (1956), talk about the "tendencies to submit to the customs of one's group, to conform, to do the expected[1] thing, and to avoid blame and criticism" (p. 87).

Krumboom and Blake (1955) demonstrated that people do act in accordance with their perception of the approved behavior in a particular social situation. Sherif and Sherif (1953) pointed out that individuals tend to act in accordance with the norms of the groups to which they aspire to belong as well as to those of the groups to which they actually belong.

---

[1]Shaffer and Shoben use the word "expected" to mean what we have defined as a "norm" in this study.

> His sense of identity, his desire to amount to something, his pride are intimately related with his membership in the group in question. Its norms are his cherished personal values. As a consequence he willingly and with zeal regulates his experience and behavior accordingly (p.173).

Influence of attributed cognitions upon behavior

But what happens when the individual does not know the norms and expectations of the group to which he wishes to relate himself? In many social situations appropriate behavior is not clearly defined, and the individual must base his behavior upon what he perceives to be acceptable (Newcomb, 1950, p. 89). There is always the possibility that his perceptions may be incorrect. For example, Gouldner and Tumin (1952) in a study of social norms attributed to managers by sales personnel in two department stores, found that disparities in visualizing norms did exist. The respondents were given a list of "store policy rules" (some of which were fictitious) and asked to indicate whether or not the rules were in effect in their store and how they were enforced. The authors, in their theoretical discussion, pointed out that knowledge of social norms is very important. They found that, "Some individuals regulate their behavior according to rules which are non-existent" (p.331). others do not adapt their behavior to norms which do exist. Such adaptation of behavior to inaccurately attributed cognitions could result in serious problems in the particular setting which Gouldner and Tumin studied. For example, an employee might be fired for exhibiting a particular kind of behavior which he incorrectly

perceived as being approved by the manager.

Bidwell (1955), in his theoretical discussion, pointed out the importance of accuracy in role-expectations.

> Role-expectations allow alter to predict the behavior of ego and act toward ego in an appropriate way. It is impossible for an integrated social system to function unless such predictions are possible, since, there being no secure basis for his actions toward ego, such action becomes difficult at best. A disruption of the system of role-expectations should thus result in a disintegration of the organization, rendering it unable to achieve its goals and satisfy the needs of its members (p.41).

Bidwell theorized that the lack of the ability of the teacher to predict accurately the behavior of the administrator would lead to frustration and tension which would be reflected in job dissatisfaction.

Hypothesis

The above discussion suggests a relationship between lack of cognitive accuracy and frustration and tension. When individuals do not know how to predict the behavior of others or the behavior which others expect and/or approve of them, they experience feelings of insecurity. As Bidwell (1955) found in his study,

> Teachers perceiving divergence of action from expectation expressed the uncertainty they felt about the relationships with the administrator. They did not know how to predict his actions or how to act toward him. Those perceiving expected behavior revealed a high degree of security in administrative relationships. Teachers in the first group stated that they felt tense and insecure in their jobs because of the uncertainty of the relationship with the administrator. Teachers in the second group spoke of the security of this relationship, and indicated that it played a considerable part in producing their satisfaction with their jobs (p.47).

Bidwell found that teachers who experienced frustration and tension

as a result of the insecurity which came from uncertainty were usually dissatisfied with their jobs. On the other hand, the absence of tension and frustration was usually associated with job satisfaction. On the basis of his findings and the theoretical framework which has been reviewed in this paper, the following general hypothesis was formulated: COGNITIVE ACCURACY WILL VARY DIRECTLY WITH INDICATIONS OF JOB SATISFACTION.

It is important to point out that in a field study in which both variables are being measured simultaneously, it is not possible to state a definite cause and effect relationship. Thus, we cannot state, on the basis of this study, that job satisfaction causes cognitive accuracy or that cognitive accuracy causes job satisfaction. Theoretically, either could be the case. Each possibility will be discussed briefly.

Job satisfaction causes cognitive accuracy. When an individual is satisfied with his job, he tends to emphasize the advantages more than the disadvantages. He usually seeks cognitive accuracy. He wants to remain happy in his job; therefore, he seeks to please those whose approval is vital to his job. The only way he can please them is to know what types of behavior they expect and/or approve.

Perhaps the theory that job satisfaction causes cognitive accuracy can best be illustrated by using the case of the dissatisfied person. The person who is dissatisfied in his job is usually

looking for rationalizations which can account for his dissatisfaction. Desiring to remove personal responsibility for the situation, he attributes certain factors to others which might account for his dissatisfaction. In his blind rationalizations he is likely to be inaccurate in his attributed cognitions.

Cognitive accuracy causes job satisfaction. It can also be argued that if a teacher knows what is expected of him he can adapt his behavior accordingly and be secure in the feeling that he is behaving as he should. He can certainly avoid engaging in overt behavior which would incur the disapproval of the community and the pressures which they might exert upon him as a result. On the other hand, if he does not know what types of behavior are expected or approved by others, he may not behave in the appropriate manner. Although he may be unaware of his cognitive inaccuracy, if he is violating a norm held by the community and/or school officials, he will sooner or later experience frustration and tension as pressures are placed upon him to conform to the approved patterns of behavior. If the tension and frustration continue, he will become dissatisfied with his job.

Whatever may turn out to be the causal relationships, it is reasonable to hypothesize a relationship between accuracy of attributed cognitions and job satisfaction. This hypothesis is the major one studied in the thesis.

CHAPTER II

METHODOLOGY

Sampling Procedure

The data for this study were taken from the larger study of the role of the public school teacher which was conducted in the Kansas City area by Biddle and associates (1961). Of the 406 individual public schools in the area, fifty were chosen for the study. To assure that the schools chosen for the study were representative of the population, information was gathered on the following six characteristics of the schools: Type of community in which the school was located, State, County, Level of school, Number of teachers, and Number of pupils. The schools were stratified by community type (urban, suburban, small city, and rural), and a proportionate number was taken from each type. "The sample for each of the four community types was then matched against population characteristics to insure representativeness" (Biddle, et al., 1961, Vol. I, p. 15).

The larger role study (to be referred to here as "The Role Study") had seven subject positions: teachers, parents, pupils, school supervisors, school board members, principals, and superintendents. From the larger study mean responses for own cognitions were computed for teachers, public school officials, and parents; and these mean responses were used as criterion measures for accuracy in

this study. It should be noted that for this purpose school supervisors, principals, and superintendents were lumped into a single category of public school officials. (For more details on the sampling procedure, the reader is referred to Biddle, et al., 1961, Vol. I, pp. 13-19).

A word of explanation is needed about the category of "people in general." Teachers were asked to attribute norms and expectations to "people in general;" however, in measuring the actual cognitions of "people in general," only the responses of parents were used. Although the sampling of parents was random, this group may not have been representative of "people in general." The sample of parents did, however, consist of a random sampling of the persons in the community who were likely to be influenced by the behavior of public school teachers.

The Testing Instrument

Forms Four and Five of The Role Study were used in this study. Form Four consisted of a group of fifty behavioral items in background specifications. Because of the length of the questionnaire, the fifty behavioral items were divided into sub-forms of ten items, and each respondent received only one sub-form. These sub-forms were designated as Forms IV-A, IV-B, IV-C, IV-D, and IV-E. Due to a heavy snow and a clerical error, Forms IV-D and IV-E were undersampled; consequently, for this study only forms IV-A, IV-B and IV-C were used. The original sample size of teachers

was 98; however, all of the respondents could not be used in this particular study because Forms Four and Five on some of the questionnaires were not complete. The total N of teachers in this study was only 68. They were distributed as follows: Form IV-A--28; Form IV-B--28; Form IV-C--12.

Each respondent was asked to give own and attributed cognitions about each of ten behavioral items in the following manner:

Page 1. What do you expect of teachers?

Page 2. What do people in general expect of teachers?

Page 3. What do teachers expect of other teachers?

Page 4. What do school officials expect of teachers?

Page 5. What do you most like and least like teachers to do?

Page 6. What do people in general most like and least like teachers to do?

Page 7. What do teachers most like and least like other teachers to do?

Page 8. What do school officials most like and least like teachers to do?

An example of a behavioral item with the rating scale follows:

Watching pupils during study period

I expect that during a public school study period most teachers would do:

A great deal of watching pupils	5
A lot of watching pupils	4
A moderate amount of watching pupils	3

A slight amount of watching pupils 2

Little or no watching pupils 1

In answering the eight questions listed above, respondents were asked to circle a number corresponding to one of the five behavioral alternatives. Pages 5 through 8 listed two scales, one for indicating positive norms (behaviors most liked) and one for indicating negative norms (behaviors least liked). The complete instrument for Form Four may be found in Appendix A.

Measures of Job Satisfaction

Two measures of job satisfaction were used in this study. Both measures were taken from answers to questions on Form Five of the Role Study. The first measure (which will subsequently be called "professional re-entrance") was based on the respondents' answers to the question, "If you had to do it over again, would you enter education again, and why?" It was assumed that if a teacher were willing to re-enter the profession of teaching he was satisfied in his job. If he were not willing to re-enter the profession it was assumed that he was dissatisfied. Although this is an indirect measure of job satisfaction and as such is based upon assumptions, it has been shown in a previous study (Getzels and Guba, 1955) that a teacher's willingness to enter the profession again if he had a choice is related to his happiness in his job. Thus, a "yes" answer to the question, "If you had to do it over again, would

you enter education again?" was coded as job satisfaction. A "no" (and all doubtful replies) were coded as job dissatisfaction.

The second measure of job satisfaction (which will be referred to as "professional advantages") was based upon the respondents' answers to the following questions on Form Five:

5. What would you say are the major advantages of teaching as a career?
6. What would you say are the major disadvantages of teaching as a career?

The number of disadvantages of the profession given by each respondent was subtracted from the number of advantages he gave. It was assumed that a teacher who was satisfied in his job would tend to emphasize the professional advantages over the disadvantages and that a teacher who was dissatisfied would tend to list more disadvantages than advantages to the teaching profession. The scores were coded on a nine point scale ranging from plus four (four more advantages than disadvantages) to minus four (four more disadvantages than advantages). For purposes of statistical tests the scores were lumped into two categories--positive and negative--with the zero scores included in the negative category. This means that if a respondent listed the same number of advantages and disadvantages or more disadvantages than advantages, he was placed in the category of job dissatisfaction. If he listed more advantages than disadvantages he was placed in the category of job satisfaction. For this thesis it

would have been preferable to have had a direct measure of job satisfaction. This was impossible since data had already been collected, and no questions were asked which would have given a direct measure of job satisfaction, all of which took place prior to formulation of the thesis problem.

Data Processing

The data were punched onto IBM cards for processing. In the larger Role Study, mean scores for own cognitions had been computed for teachers, public school officials, and parents. These mean scores were then subtracted from the cognitions which teachers attributed to these positions to get disparity scores. (The attributed cognitions had already been punched onto IBM cards. The cards were fed into an IBM Calculating Punch (602A), and the mean scores were subtracted from the attributed cognitions.) The resulting disparity scores were punched onto another set of IBM cards which also contained the data on job satisfaction. Contingency tables which showed relationships between job satisfaction and cognitive accuracy were prepared on the IBM 402 Tabulator. The control panel of the 402 was wired to print row, column, and grand totals automatically. By attaching an IBM 514 Summary Punch to the 402 Tabulator, secondary cards corresponding with each line in the tables were punched as the tables were printed (Biddle and Simpson, 1961). These secondary cards were fed into a Burroughs 205-Datatron Computer which computed the Mann-Whitney z_U.

The Mann-Whitney z_{ij} is similar to a t test of difference between two sample means. However, the Mann-Whitney test does not assume that the intervals in ranked data are equal; nor does it assume normal distribution of the populations from which the two samples are drawn. When the total N's for each sample were less than twenty, a table for critical values (Riddle and Simpson, 1961) was used to determine significant differences. For each of the measures of job satisfaction 270 Mann-Whitney z_{ij}'s were computed together with the contingency tables from which they were drawn and the means of each tabular row. Results presented in this thesis were drawn from the significant Mann-Whitney comparisons.

CHAPTER III

RESULTS FOR PROFESSIONAL RE-ENTRANTS

This chapter contains the results for the professional re-entrant measure of job satisfaction. Teachers were classified as satisfied or dissatisfied with their profession on the basis of their answers to the question, "If you had it to do over again, would you enter education?" A "yes" answer was assumed to indicate job satisfaction. A "no" (or doubtful) answer was assumed to indicate job dissatisfaction.

Tables of Significant Differences

The tables in this chapter give data on the significant differences between the cognitions which teachers attributed to three sentient-objects (people in general, teachers, and school officials) and the cognitions which were actually held by those positions. Table 1 gives the total number of significant differences by sentient-object, type of cognition, significance level, and direction of the difference. Tables 2 through 7 give item analyses of the results.

Findings

In the analysis of the relationship between cognitive accuracy and the professional re-entrance measure of job satisfaction,

170 Mann-Whitney u_g's were computed. There were thirty differences significant at $p \leq .10$ and eighteen differences significant at $p \leq .05$. These are listed in Table 1.

Out of a total of 170 Mann-Whitney u_g's twenty-seven differences at $p \leq .10$ and thirteen differences at $p \leq .05$ would be predicted by chance alone. We may conclude that the differences at $p \leq .05$ and $p \leq .10$ barely exceed chance variation. If we assume that other than chance variation does occur, two general results may be seen in Table 1.

1a. Significant differences occur more frequently in expectations than in norms. They occur more frequently in positive norms than in negative norms. This means that teachers were more accurate in their attribution of negative norms than in any other kind of attributed cognition.

1b. Teachers were most accurate in their attributed cognitions to other school teachers and least accurate in the cognitions attributed to people in general ($p \leq .10$). However, when the significant differences at the $p \leq .05$ level only are considered, the number is the same for people in general and school officials (seven for each). The highest accuracy still occurs in the cognitions attributed to other teachers.

Table 1 also indicates the direction of the significant differences. Those in a positive direction support the hypothesis.

Table 1

Number of Significant Differences in Cognitive Accuracy Between Teachers Willing and not Willing to Re-enter the Profession

$p \leq .10$

Sentient-Object	Expectations			Positive Norms			Negative Norms			Totals		
	+	-	T	+	-	T	+	-	T	+	-	T
People in General	3	3	6	1	3	4	1	1	2	5	7	12
Other Teachers	5	-	5	2	-	2	-	-	-	7	-	7
School Officials	2	1	3	2	3	5	3	-	3	7	4	11
Totals	10	4	14	5	6	11	4	1	5	19	11	30
	P: N.S. (sign test)			P: N.S. (sign test)			P: N.S. (sign test)					

$p \leq .05$

People in General	2	2	4	1	1	2	1	-	1	4	3	7
Other Teachers	4	-	4	-	-	-	-	-	-	4	-	4
School Officials	2	1	3	2	-	-	2	-	2	6	1	7
Totals	8	3	11	3	1	4	3	0	3	14	4	18
	P: N.S. (sign test)			P: N.S. (sign test)			P: N.S. (sign test)					

It is obvious that a larger proportion of the total number are positive than negative. To determine whether or not these two proportions differ significantly, a sign test was used.* Bennett (1962) indicated that the behavioral items used in this study were substantially independent of one another, which justifies the use of a sign test. The results of his sample correlations are found in Appendix B.

The sign test, however, failed to show that the positive and negative proportions differed significantly in any of the cognitions at $p \leq .05$. It is thus impossible to conclude from this measure of job satisfaction that teachers who indicated job satisfaction are significantly more accurate in the cognitions which they attribute to people in general, other teachers, and school officials than are teachers who indicated job dissatisfaction.

Item Analysis

Although the over-all results gave only weak support to the hypothesis, an item analysis reveals that on certain items or categories of items the hypothesis received more support.

An analysis of the significant differences by items is contained in Tables 2 through 7. Of the thirty behavioral items on the three

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*This test was applied in a two-tailed form which was more conservative and allowed for the interpretation of inferring results, as in Chapter IV.

forms, only sixteen showed any significant differences. Out of the fourteen items which showed no significant differences, nine were on Form IV-S. This means that only one item from that form showed any significant differences, and it showed only one. This is understandable when it is pointed out that of the twenty-eight teachers who responded to Form IV-S, five fell into the dissatisfied category and twenty-three fell into the satisfied category. It is very difficult to show significant differences with N's of that range. It is quite possible that if the dissatisfied category had been larger, more significant differences would have occurred.

The largest number of significant differences which occurred on any single item was on the first item listed in Table 2--"Singing during a classroom singing period." In four of the six significant differences on that item ($p \leq .05$), teachers who indicated job satisfaction were more accurate in their attributed cognitions than were teachers who indicated job dissatisfaction. The latter were more accurate in positive norms attributed to school officials. This difference, however, was only at the ten percent level. On the other two items with the background setting of a classroom singing period, teachers who indicated job dissatisfaction were more accurate in the positive norms they attributed to people in general and less accurate in the negative norms they attributed to school officials.

In the category of discipline (Table 3) three significant differences were found, and teachers who indicated job satisfaction

Table 2

Significant Differences Between Attributed Cognitions

And Actual Cognitions for Classroom Singing Period

Item/ Emotion Object	Expectation	Positive Norm	Negative Norm
Item (3) Singing during a classroom singing period			
People in General	+.81**	+.89**	--
Teachers	+.94**	--	--
School Officials	+.66**	-.39*	+.15*
Item (13) Having pupils sing solos during a classroom singing period			
People in General	--	--	--
Teachers	--	--	--
School Officials	--	--	+1.25**
Item (23) Grading papers during a classroom singing period			
People in General	--	-.33*	--
Teachers	--	--	--
School Officials	--	--	--

Note: For the remainder of the tables in this chapter:
* = .05 < p < .10, ** = .01 < p < .05, *** = .001 < p < .01.

Table 3

Significant Differences Between Attributed Cognitions

And Actual Cognitions for Disciplining Pupils

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (8) Disciplining pupils during basketball game in gym			
People in General	--	--	--
Teachers	--	--	--
School Officials	+.69**	+.30**	--
Item (29) Disciplining pupils in the cafeteria			
People in General	--	--	-1.22*
Teachers	--	--	--
School Officials	--	--	--

were more accurate in their attributed cognitions in two of the three cases. They more accurately attributed positive norms and expectations to school officials ($p \leq .05$) and less accurately attributed negative norms to people in general ($p \leq .10$) than did those teachers who indicated job dissatisfaction.

Table 4 gives the significant differences in accuracy for cognitions for supervising in the classroom and in the halls. The first three items deal with supervising pupils in the classroom; the fourth deals with supervising pupils in the halls. It is interesting to note that in the first three items all of the significant differences were positive for expectations and positive norms. This means teachers who indicated job satisfaction were more accurate in the expectations they attributed to people in general and other teachers and the one case of a positive norm attributed to other teachers, than were teachers who indicated job dissatisfaction. There were no significant differences on any of the first three items in cognitions attributed to school officials or in negative norms attributed to any of the three sentient objects. On the item of "policing the halls" teachers who indicated job dissatisfaction were more accurate in their attributed expectations and positive norms and teachers who indicated job satisfaction were more accurate in the positive norms which they attributed to school officials. There were no significant differences in any cognitions attributed to other teachers or in negative norms attributed to any of the three sentient objects.

Table 4

Significant Differences Between Attributed Cognitions and Actual Cognitions for Supervising in the Classroom and in the Halls

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (1) Watching pupils during study period			
People in General	+.32**	--	--
Teachers	+.66**	--	--
School Officials	--	--	--
Item (2) Supervising pupils in a classroom test			
People in General	--	--	--
Teachers	+1.04***	+.53*	--
School Officials	--	--	--
Item (22) Leaving the room during a classroom test			
People in General	+.33*	--	--
Teachers	--	--	--
School Officials	--	--	--
Item (7) Policing the halls			
People in General	-.63**	-.64**	--
Teachers	--	--	--
School Officials	--	+.53**	--

On the items which deal with relationships with other teachers (Table 5) two of the three significant differences support the hypothesis. Teachers who indicated job satisfaction were more accurate in the expectations they attributed to other teachers on both items than were teachers who indicated job dissatisfaction. The latter were more accurate in the positive norms attributed to school officials on the item of "visiting with other teachers on the playground." There were no significant differences in negative norms or in any cognitions attributed to people in general.

The two items included in Table 6 have been classified under "self-discipline." Some people think that all of a teacher's time spent at school should be utilized in school activities and not for personal work or pleasure. Teachers are also expected to do a lot of extra-curricular work, and the second item on Table 6 is concerned with cognitions about "social tasks." On this item the hypothesis is rejected. Teachers who indicated job dissatisfaction were more accurate in the expectations and positive norms which they attributed to school officials on this particular item than were teachers who indicated job satisfaction. The only area in the two items in which the latter were more accurate was in positive norms attributed to other teachers on the item, "reading own books during study period." There were no significant differences in attributed negative norms.

Table 7 lists four significant differences on miscellaneous items, and two of these differences reject the hypothesis that

Table 5

Significant Differences Between Attributed Cognitions And Actual Cognitions for Relationships with Other Teachers

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (9) Visiting with other teachers on playground			
People in General	--	--	--
Teachers	+1.02**	--	--
School Officials	--	-.27*	--
Item (10) Cooperating with other teachers in school			
People in General	--	--	--
Teachers	+.99*	--	--
School Officials	--	--	--

Table 6

Significant Differences Between Attributed Cognitions

And Actual Cognitions for Self Discipline

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (21) Reading own books during study period			
People in General	--	-.33*	--
Teachers	--	+.78*	--
School Officials	--	--	--
Item (33) Doing mental tasks during basketball game in gym			
People in General	--	--	--
Teachers	--	--	--
School Officials	-1.17**	-1.03*	--

Table 7

Significant Differences Between Attributed Cognitions and Actual Cognitions for Miscellaneous Items

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (26) Visiting with parents during PTA meeting in auditorium			
People in General	-1.38**	--	--
Teachers	--	--	--
School Officials	--	--	--
Item (27) Being partisan during football game on athletic field			
People in General	-.95*	--	--
Teachers	--	--	--
School Officials	--	--	--
Item (30) Participating in community activities out of school			
People in General	--	--	+1.45**
Teachers	--	--	--
School Officials	--	--	+1.33**

teachers who indicated job satisfaction would be more accurate in the cognitions which they attributed to people in general than would teachers who indicated job dissatisfaction. No significant differences occurred in cognitions attributed to other teachers.

Summary

The findings for the relationship of cognitive accuracy and the professional re-entrance measure of job satisfaction gave weak support to the hypothesis. At the five percent level of significance the hypothesis was supported for the cognitions of expectations and positive norms. Teachers who indicated job satisfaction were more accurate in the expectations and positive norms which they attributed to the three sentient-objects than were teachers who indicated job dissatisfaction. The latter, however, were more accurate in their attribution of positive norms at the ten percent level of significance and in their attribution of negative norms at both levels. Using the total number of significant differences, at the ten percent level, sixteen out of thirty were in the direction which supported the hypothesis; at the five percent level the number in support of the hypothesis was eleven out of eighteen. These proportions, however, were not statistically significant and could have occurred by chance alone.

The highest number of significant differences by cognition type occurred in expectations; the lowest was in negative norms.

Teachers were most accurate in the cognitions which they attributed to other teachers and least accurate in the cognitions attributed to people in general ($p \leq .10$). At the five percent level the same number of significant differences occurred for cognitions attributed to people in general and to school officials.

An item analysis of the findings revealed that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were more accurate in their attributed cognitions in the areas of discipline, activities during classroom singing period, supervising pupils in the classroom, relationships with other teachers, and participating in community activities. Those teachers who indicated job dissatisfaction were more accurate in their attributed cognitions in the following items: "policing the halls," "doing menial tasks during basketball game in gym," "visiting with parents during PTA meeting in auditorium," "having pupils sing solos during a classroom singing period," and "being partisan during football game on athletic field." A closer look at these items and categories may give some indication of the relationship of cognitive accuracy and job satisfaction. For example, teachers who indicated job dissatisfaction were inaccurate in attributed cognitions in the general areas of discipline and supervising, relationships with other teachers, and participation in community activities. It is not at all difficult to understand how a person could become dissatisfied in his job if he were not behaving in an appropriate manner in these

areas. On the other hand, the dissatisfied teachers were more accurate on items which represent activities teachers usually don't enjoy doing--"policing the halls," "doing menial tasks," "visiting with parents during PTA meetings." In fact, these activities are often the subjects of complaints among teachers. Perhaps teachers who are dissatisfied in their jobs are more likely to verbalize their resentment of these activities or, in magnifying the unpleasantness, to inaccurately attribute cognitions about these activities to other people.

It is important to note that of the fourteen items which showed no significant differences, nine were on Form IV-B. As we have noted, of the twenty-eight teachers who responded to this form, only five fell into the dissatisfied category. Thus, the sample split was 5 and 23 for statistical tests, and it is difficult to get significant differences with such a split. If the sample had been more evenly divided between the two categories, it is possible that more significant differences would have occurred.

In conclusion, the hypothesis received only weak support from the total analysis and from the item analyses based on the professional re-entrance measure of job satisfaction.

CHAPTER IV

RESULTS FOR PROFESSIONAL ADVANTAGES

This chapter contains the results for the professional advantages measure of job satisfaction. For this measure, teachers were divided into job satisfaction or dissatisfaction categories according to their answers to questions five and six of Form Five of the Role Study:

5. What would you say are the major advantages of teaching as a career?
6. What would you say are the major disadvantages of teaching as a career?

The number of disadvantages was subtracted from the number of advantages given by each teacher. The differences were coded on a scale which ranged from plus four to minus four. All positive scores (indicating more advantages than disadvantages) were coded as "job satisfaction." The zero scores and all negative scores (more disadvantages than advantages) were coded as "job dissatisfaction."

Tables of Significant Differences

The tables in this chapter give data on the significant differences between the cognitions which teachers attributed to three sentient objects (people in general, teachers, and school officials) and the cognitions which were actually held by those positions.

Table 8 gives the total number of significant differences by sentient object, type of cognition, significance level, and direction of the difference. Tables 9 through 14 give item analyses of the results.

Findings

Out of a total of 270 Mann-Whitney z_U's computed for the professional advantages measure of job satisfaction, thirty-nine were significant at $p \leq .10$ and twenty were significant at $p \leq .05$ which exceeds the minimum number needed to conclude that the results did not occur by chance alone. The total number and breakdown of significant differences are listed in Table 8.

If we assume that other than chance variation does occur, four general results may be seen in Table 8.

8a. The highest number of significant differences occurred in the expectations which teachers attributed to the three sentient objects. Teachers were least accurate in attributed expectations and most accurate in attributed norms. At the five percent level, however, teachers were least accurate in attributed expectations and most accurate in attributed positive norms.

8b. At $p \leq .10$ teachers were less accurate in the cognitions which they attributed to school officials than to any other sentient object. They were most accurate in the cognitions which they attributed to other teachers.

Table 8

Number of Significant Differences in Cognitive Accuracy Between Those Indicating More or Less Professional Advantages

$P \leq .10$

Sentient-Object	Expectations			Positive Norms			Negative Norms			Totals		
	+	-	T	+	-	T	+	-	T	+	-	T
People in General	4	-	4	1	1	2	-	7	7	5	8	13
Other Teachers	3	-	3	-	3	3	-	3	3	3	6	9
School Officials	9	-	9	3	5	8	-	-	-	12	5	17
Totals	16	0	16	4	9	13	0	10	10	20	19	39
	$P \leq .001$ (sign test)			P:N.S. (sign test)			$P \leq .01$ (sign test)					

$P \leq .05$

People in General	2	-	2	1	1	2	-	4	4	3	5	8
Other Teachers	2	-	2	-	1	1	-	3	3	2	4	6
School Officials	4	-	4	2	-	2	-	-	-	6	-	6
Totals	8	0	8	3	2	5	0	7	7	11	9	20
	$P < .01$ (sign test)			P:N.S. (sign test)			$P \leq .01$ (sign test)					

8c. Teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were significantly more accurate in attributing expectations and significantly less accurate in attributing negative norms.

8d. The attribution of positive norms revealed no significant differences between the satisfied and dissatisfied groups of teachers.

Item Analysis

An item analysis of these data gives an indication of the areas and specific items in which the hypothesis is supported or rejected. Of the thirty behavioral items on the three various forms, eleven did not show any significant differences. The items which did show some significant differences will be discussed in this section.

The item which showed the largest number of significant differences on the professional re-entrance measure of job satisfaction was "singing during a classroom singing period." That item also proved to be important in the professional advantages measure (Table 9). Three significant differences were indicated, and two of the three supported the hypothesis. Teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were slightly more accurate in the positive norms which

Table 9

Significant Differences Between Attributed Cognitions

And Actual Cognitions for Classroom Singing Period

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (3) Singing during a classroom singing period			
People in General	--	+.80***	-.51*
Teachers	--	--	--
School Officials	+.90**	--	--
Item (13) Having pupils sing solos during a classroom singing period			
People in General	--	--	--
Teachers	--	--	--
School Officials	--	-.54*	--

Note: For the remainder of the tables in this chapter:
* = .05 < p < .10, ** = .01 < p < .05, *** = .001 < p < .01.

they attributed to people in general and in expectations attributed to school officials. On a second activity in the same setting, "having pupils sing solos during a classroom singing period," teachers who indicated job dissatisfaction were slightly more accurate in positive norms attributed to school officials than were teachers who indicated job satisfaction, thus rejecting the hypothesis on this item.

Table 10 gives the number of significant differences which occurred in five items concerning discipline in the classroom. Of the seven significant differences, only three ($p \leq .05$) support the hypothesis. The table shows that in the area of discipline, teachers who indicated job dissatisfaction were more accurate in attributed negative norms and teachers who indicated job satisfaction were slightly more accurate in attributed expectations. In general, these items were not very significant. Only one of the five items showed more than one significant difference.

The items in Table 11 are similar to those in Table 10 in that they are concerned with disciplining or supervising. The difference is that the items in Table 10 are concerned with the supervision of pupils within the physical setting of the classroom; those in Table 11 deal with supervising pupils outside the classroom setting. As Table 11 indicates, all of the significant differences in expectations support the hypothesis; all of those in negative norms reject the hypothesis. Teachers who indicated job satisfaction were significantly more accurate in the expectations which they attributed to

Table 10

Significant Differences Between Attributed Cognitions And Actual Cognitions for Disciplining in the Classroom

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (1) Watching pupils during study period			
People in General	--	--	--
Teachers	--	--	-.46**
School Officials	+.73**	+.35**	--
Item (2) Supervising pupils in a classroom test			
People in General	--	--	-.46**
Teachers	--	--	--
School Officials	--	--	--
Item (4) Ignoring pupils misbehaving in a classroom			
People in General	--	--	-1.41**
Teachers	--	--	--
School Officials	--	--	--
Item (12) Watching for cheaters during a classroom test			
People in General	+.50**	--	--
Teachers	--	--	--
School Officials	--	--	--
Item (14) Telling misbehaving pupils in the classroom to stop talking			
People in General	--	--	--
Teachers	--	--	--
School Officials	--	-.74*	--

Table 11

Significant Differences Between Attributed Cognitions and Actual Cognitions for Supervising Pupils Outside the Classroom

Item/ Sentient Object	Expectations	Positive Norm	Negative Norm
Item (5) Keeping pupils quiet in the library			
People in General	--	--	-.57*
Teachers	--	--	-.46**
School Officials	+.46*	--	--
Item (8) Disciplining pupils during basketball game in gym			
People in General	--	--	-.74**
Teachers	--	--	-.22**
School Officials	+.63*	+.42*	--
Item (7) Policing the halls			
People in General	--	--	-.77**
Teachers	--	--	--
School Officials	+.48*	+.55**	--
Item (12) Supervising on playground			
People in General	+.49**	--	--
Teachers	+.33**	--	--
School Officials	+.38*	--	--

people in general, other teachers, and school officials in the area of discipline them were teachers who indicated job dissatisfaction. The latter, however, were more accurate in the negative norms which they attributed to the three sentient-objects.

Table 12 shows that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were less accurate in the positive norms they attributed to people in general and to teachers on the item "cooperating with the principal in school" and in the positive norms they attributed to other teachers on the item "cooperating with other teachers in school."

Table 13 contains the number of significant differences on three items which have been classified as "professional and community activities." On these three items the three significant differences in expectations support the hypothesis; those which occurred in negative and positive norms reject the hypothesis. It should be noted that all of these significant differences were only at the ten percent level.

Table 14 gives the number of significant differences on three miscellaneous items. All of these differences are in expectations, and all support the hypothesis. Three of the differences are significant at $p \leq .05$.

Summary

The findings for the relationship of cognitive accuracy and the professional advantages measure of job satisfaction gave strong

Table 12

Significant Differences Between Attributed Cognitions and Actual Cognitions for Relationships with the Principal and Other Teachers

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (10) Cooperating with other teachers in school			
People in General	--	--	--
Teachers	--	-.54*	--
School Officials	--	--	--
Item (20) Cooperating with the principal in school			
People in General	--	-.77**	--
Teachers	--	-.97**	--
School Officials	--	--	--

Table 13

Significant Differences Between Attributed Cognitions and Actual Cognitions for Professional and Community Activities

Item/ Sentient Object	Reputation	Positive Norm	Negative Norm
Item (6) Speaking out at PTA meeting in the auditorum			
People in General	--	--	-.15*
Teachers	+.38*	--	--
School Officials	+.44*	-.44*	--
Item (16) Attending PTA meetings in the auditorium			
People in General	+.26*	--	--
Teachers	--	--	--
School Officials	--	-.51*	--
Item (3) Participating in community activities out of school			
People in General	--	--	--
Teachers	--	-.57*	--
School Officials	--	--	--

Table 14

Significant Differences Between Attributed Cognitions and Actual Cognitions for Miscellaneous Items

Item/ Sentient Object	Expectation	Positive Norm	Negative Norm
Item (9) Visiting with other teachers on playground			
People in General	--	--	--
Teachers	+.61**	--	--
School Officials	--	--	--
Item (15) Doing own studying and grading in the library			
People in General	+.54*	--	--
Teachers	--	--	--
School Officials	+.68**	--	--
Item (17) Allowing pupils to explore during experiments in the laboratory			
People in General	--	--	--
Teachers	--	--	--
School Officials	+.83**	--	--

support to the hypothesis in the area of expectations. Teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were significantly more accurate ($p \leq .01$, Sign Test) in the expectations which they attributed to people in general, other teachers, and school officials. However, they were significantly less accurate ($p \leq .01$, Sign Test) in attributing negative norms to the same sentient objects. In applying the sign test to the significant differences in attributed positive norms, it was found that the two groups of teachers (satisfied and dissatisfied) did not differ significantly. The implications of these findings will be discussed in the following chapter.

The greatest number of significant differences by cognition type occurred in expectations. Teachers in general were most accurate in the cognitions which they attributed to other teachers and least accurate in the cognitions attributed to people in general ($p \leq .10$). At $p \leq .05$ teachers were most accurate in cognitions attributed to other teachers and school officials and least accurate in cognitions attributed to people in general.

An item analysis of the findings revealed that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were more accurate in their attributed expectations on the following categories of items: discipline in the classroom, supervising pupils outside the classroom, and miscellaneous items. However, teachers who indicated job dissatisfaction were more accurate in attributed negative norms in the first two categories of items.

Teachers who indicated job satisfaction showed less cognitive accuracy in the category "relationships with the principal and other teachers" than did teachers who indicated job dissatisfaction. All of the significant differences in this category were in positive norms. The same situation occurred in the category of professional and community activities where teachers who indicated job dissatisfaction, as compared with those who indicated job satisfaction, were more accurate in attributed positive norms.

It is important to note that of the eleven behavioral items which showed no significant differences by the professional advantages measure of job satisfaction, nine were from Form IV-C. Only twelve teachers responded to this form. It is difficult to get significant differences with such a small N. Twenty-eight teachers responded to Form IV-A, and an equal number were available for Form IV-B. Since so many more significant differences appeared on the first two forms (IV-A and IV-B) than on the third (IV-C), we might assume that the number of significant differences on Form IV-C would have been greater if the number of respondents had been larger.

In conclusion, the hypothesis was confirmed for expectations and infirmed for negative norms according to the data presented in this chapter. Teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were significantly more accurate in attributing expectations and significantly less accurate in attributing negative norms to people in general, other teachers, and

public school officials. The two groups did not differ significantly in attributing positive norms to the three content object positions.

CHAPTER V

DISCUSSION

The first section of this chapter presents a discussion of the possible sources of error involved in the study. The second section discusses the implications of the results of the study.

Sources of Error

Sample size

One obvious sources of error in this study was the small size of the sample. Only sixty-eight teachers from the Kansas City area were included in the portion of data utilized in this thesis. Although the sample was originally a random one, almost a third of the teacher respondents in the larger Role Study could not be included in this study for reasons which were discussed earlier. The sixty-eight respondents were split into three groups when the questionnaire was administered. Twenty-eight responded to Form A, twenty-eight to Form B, and only twelve to Form C. With samples this small we face the possibility of a large variance between their responses and those of the total population.

The small sample sizes also resulted in a problem with regard to statistical tests. After the respondents were divided by Forms A, B, or C, the group which responded to each form had to be divided into categories of job satisfaction or dissatisfaction for purposes of

statistical tests. Thus, the small N of twelve on Form C was divided into three and nine on the professional re-entrance measure of job satisfaction and five and seven on the professional advantages measure. On the professional re-entrance measure for Form B the split was five and twenty-three. It is difficult to get significant differences from samples such as these. Form A_2 which had a split of eleven and seventeen on the professional re-entrance measure and twelve and sixteen on the professional advantages measure, showed a greater number of significant differences in both cases. On the professional re-entrance measure seven out of ten items on Form A and all items on that form on the professional advantages measure showed one of more significant differences. We might conclude that more significant differences would have occurred had the sample size been larger on Form C and/or more evenly split on Form B. This possible source of error was unavoidable in this particular study since the data had already been collected.

Categorical assumptions

Another source of error would be the designation of parents as "people in general." Teachers were asked to attribute cognitions to "people in general." But in measuring the actual cognitions of "people in general" a random sample of the community was not obtained; rather, the responses of parents (who were chosen randomly) were used. Parents may or may not be representative of "people in general." According to Biddle, et al. (Vol I, 1961), "It is quite probable

that such samples do, indeed, represent 'the public' (particularly that segment which makes decisions with regard to school matters) but this has not been established" (p. 34). Riddle also pointed out that the samples were under-representative of ethnic minorities and the lower class.

Measures of job satisfaction

A third possible source or error was also unavoidable because the data were collected prior to the formulation of this particular thesis topic. The measures of job satisfaction were indirect and perhaps greatly inadequate. The teachers were not asked directly whether or not they were satisfied with their jobs. Both measures of job satisfaction were based on assumptions which have been discussed in previous chapters. It is possible that these assumptions were, in some cases, false. For example, a teacher may have answered "yes" to the question, "If you had it to do over again, would you enter education?" That response would have been coded as "job satisfaction." In reality, the respondent could have been very dissatisfied with her job and still have answered this question in the affirmative. This could have happened in the case of married women who could conceivably dislike teaching as a career but pursue this particular profession only because it is compatible with home-making. Likewise, we may not have been justified in assuming that a person who listed more disadvantages than advantages for teaching as a career was dissatisfied with his job. Perhaps the disadvantages

were simply easier to verbalize. Maybe some of the respondents were caught on a "bad" day when everything had gone wrong in which case they would have had a tendency to list more disadvantages of the teaching profession than they would have under ordinary circumstances.

The possibility that our measures of job satisfaction introduced a source of error is illustrated by the fact that in some cases teachers who indicated willingness to re-enter the profession listed more disadvantages than advantages to the teaching profession. This means that on the professional re-entrance measure of job satisfaction they were classified as "satisfied." On the professional advantages measure they were classified as "dissatisfied."

Intervening variables

A fourth possible source of error is the one which is involved in any studies which attempt to relate independent and dependent variables without controlling other factors--the problem of intervening variables. A positive relationship between job satisfaction and cognitive accuracy does not necessarily mean that one is the cause or result of the other. A person could be "satisfied" in his job and still inaccurately attribute cognitions to other people. Many factors besides cognitive accuracy could contribute to a person's satisfaction in his job; likewise, many factors other than cognitive inaccuracy could create job dissatisfaction.

Representativeness of other communities

Finally, it should be remembered that the respondents in this study may not be representative of teachers, people in general, and school officials in other communities. One must therefore be careful in generalizing the findings.

Implications of the Study

Implications for role theory

It was hypothesized in this study that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, would be more accurate in the cognitions which they attributed to people in general, other teachers, and public school officials. Two measures of job satisfaction were used: professional re-entrance and professional advantages. The relationship of cognitive accuracy and job satisfaction was compared separately for each measure of job satisfaction. A sign test was used to determine whether or not the two groups of teachers (satisfied and dissatisfied) differed significantly in cognitive accuracy.

In applying the sign test to the data for the professional re-entrance measure of job satisfaction, it was found that the satisfied teachers were more accurate ($p \leq .05$) in attributed expectations, positive norms and negative norms, but the differences in cognitive accuracy between the satisfied and dissatisfied teachers were not statistically significant on any of the cognition types.

The application of a sign test to the data for the professional advantages measure of job satisfaction revealed that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were significantly more accurate ($p \leq .01$) in attributed expectations and significantly less accurate ($p \leq .01$) in attributed negative norms. Thus, the hypothesis was strongly confirmed for expectations and strongly infirmed for negative norms.

The infirming of the hypothesis on attributed negative norms suggests that an error exists in the theory from which the hypothesis was derived. It was hypothesized that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, would be more accurate in the cognitions which they attributed to people in general, other teachers, and school officials. Now, then, can we explain the finding that teachers who indicated job dissatisfaction were more accurate in attributing negative norms to people in general, other teachers, and school officials than were teachers who indicated job satisfaction? The explanation seems to lie within the content of the negative norms which showed significant differences.

A close look at the data reveals that of the significant differences in negative norms according to the professional advantages measure of job satisfaction (all of which infirmed the hypothesis), eight out of ten at $p \leq .10$ and all of the significant differences at $p \leq .05$ were in the categories of disciplining and supervising pupils (Tables 10 and 11). Thus, we cannot concluded from our data

teachers who indicated job dissatisfaction, as compared with those who indicated job satisfaction, were in general more accurate in attributed negative norms. Although their accuracy in attributed negative norms was statistically significant, all of the differences at $p \leq .05$ were in the categories of disciplining and supervising pupils. Teachers who indicated job satisfaction were more accurate in attributed expectations in all content categories of items by the professional advantages measure of job satisfaction. Thus, the significant differences which confirmed the hypothesis for expectations in general represented all content categories for behavioral items whereas those which infirmed the hypothesis ($p \leq .05$) were limited to items which dealt with the supervision and disciplining of pupils. Nevertheless, we must attempt to explain this infirming of the hypothesis for negative norms. Why should dissatisfied teachers be more accurate in attributed negative norms for discipline than satisfied teachers?

One explanation suggest itself. If it should turn out that job satisfaction precedes (or causes) conditions of accuracy, there may be a significant difference between satisfied and dissatisfied teachers in dealing with cognitive material. The dissatisfied teacher, who is looking for rationalizations of her disenchantment, may focus her attention upon prohibitions and negative norms in the teaching role. In effect, she may become "sensitized" to the negative features of her job. In contrast, the satisfied teacher has less need to

emphasize negative aspects and is generally more concerned with accurate reflection of the environment than with rationalizing an unpleasant situation. Using this explanation, the emphasis of accuracy in the area of discipline among the dissatisfied suggests that problems of discipline are particularly difficult for teachers to manage and are a major source of dissatisfaction with the job.

It is possible of course, to explain these results by assuming that accuracy leads to job satisfaction; but no simple explanation has occurred to the author. One may conclude, however, that the problem is much more complicated than has been thought by previous investigators.

The findings of this study suggest a change in the theory that cognitive accuracy is related to job satisfaction. The theory must be expanded to account for the fact that job dissatisfaction was related to cognitive accuracy in the case of negative norms concerning the disciplining and supervising of pupils. These unanticipated findings could be due to the nature of the negative norm or they could be due to the specific content of the negative norms which showed the differences. In either case, the findings are important for role theory and should lead to further studies in the field. The hypothesis could be tested with larger samples in other areas of the country, using a more direct measure of job satisfaction. The relationship of cognitive accuracy and job satisfaction should be tested in other occupations and, if supported, might become a useful

tool in eliminating some of the causes of job dissatisfaction in various occupations and professions.

Implications for Teacher Recruitment

Another utility of this study would be the insight it gives into a possible cause of job dissatisfaction in the teaching profession. Perhaps the greatest problem facing the academic community today is the recruitment and training of a sufficient number of qualified teachers for the public schools and colleges. Constantly we try to answer the question, "How can we attract more qualified young people to the teaching profession?"

Phillips (1955), in a study of community control of teacher behavior, pointed out that one disadvantage to the teaching profession is the fact that teachers feel that the community imposes certain restrictions upon their behavior out of the school setting as well as in the school building. His conclusion was:

> Since it appears that the belief that the teacher leads a restricted life keeps some young people from entering the profession, it is important for those who are interested in recruiting more teachers to understand the origin and nature of opinions regarding teacher behavior. Without this knowledge no intelligent approach can be made to the problems involved in changing or eradicating those opinions which not only keep young people out of teaching, but which also lower teacher morale and undermine the dignity of the profession. (p.294).

Riddle, et al. (1962) in their study of the role of the public school teacher in Kansas City (the larger study from which data for this thesis were taken) discovered that "respondents attributed conservative, inaccurate, nonveridical norms and expectations to

People in General" (p. 12). Perhaps this is true of teachers in other communities. They may be imposing restrictions upon themselves which they do not like simply because of the inaccurate cognitions they attribute to the community.

Rogers (1950) pointed out that, "The morale of teachers, their self-respect, and the kind of schools they will maintain, depends to a great extent on what they believe people think of them" (p.483). If teachers are inaccurate in their attributed cognitions, and if their lack of cognitive accuracy leads to job dissatisfaction, perhaps the situation could be corrected by studies which point up these discrepancies. Teaching might become a more desirable profession to young people if they actually knew what types of behavior the community and school officials approve and expect of a public school teacher both in and out of the school setting.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to relate cognitive accuracy to indications of job satisfaction in the teaching profession. Cognitive accuracy was measured by computing disparity scores between the cognitions which teachers attributed to three sentient-object positions (people in general, other teachers, and school officials) and the mean scores of the cognitions actually held by those positions. Two measures for job satisfaction were used. The professional re-entrance measure was based upon the teachers' indications of willingness to re-enter the profession. The professional advantages measure was based upon the teachers' listings of advantages and disadvantages to the profession.

It was predicted in this study that teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, would be more accurate in the expectations, positive norms, and negative norms which they attributed to people in general, other teachers, and school officials. The data were analyzed separately by each of the two measures of job satisfaction.

The relationship of cognitive accuracy and job satisfaction received only weak support by the professional re-entrance measure of job satisfaction. Out of a total of 270 Mann-Whitney z_U's computed, only eighteen significant differences ($p \leq .05$) were found. Fourteen of those differences supported the hypothesis, but the number of

significant differences which supported the hypothesis did not differ significantly from those which rejected the hypothesis.

The hypothesis received stronger support in the analysis of the relationship of cognitive accuracy and job satisfaction by the professional advantages measure of job satisfaction. It was strongly confirmed for expectations. Teachers who indicated job satisfaction, as compared with those who indicated job dissatisfaction, were significantly more accurate ($p \leq .01$) in the expectations which they attributed to people in general, other teachers, and school officials. But they were significantly less accurate ($p \leq .01$) in the negative norms concerning disciplining and supervising pupils which they attributed to the three sentient-object positions. The differences between satisfied and dissatisfied teachers in attributed positive norms were not statistically significant.

The data were also analyzed by items and categories of items. In general it was found that job satisfaction was related to cognitive accuracy in attributed expectations in the following areas: disciplina, supervising pupils in and out of the classroom, activities during classroom singing period, relationships with other teachers, professional and community activities, and certain miscellaneous items. Teachers who indicated job dissatisfaction were significantly more accurate in attributed negative norms in the categories of disciplining and supervising pupils.

As was pointed out earlier in this thesis, we cannot assume a causal relationship between job satisfaction and cognitive accuracy. Either one could be the cause of the other; they could influence each other simultaneously, or a third variable could be producing the relationship. But a more detailed study of the relationship might be very valuable to the future recruitment of public school teachers as well as to the propositional structure of role theory.

APPENDICES

Appendix A

Schedules of Behavior Frameworks

The following three lists of behaviors and the respective alternatives for response are the three general schedules used in this thesis. Each list was given to each subject eight different times for responses from eight different points of view. The eight different points of view are enumerated in the "Methodology and Data Analysis" section of the thesis.

Form A

1. Watching pupils during study period
   During a public school study period most teachers would do:

A great deal of watching pupils	5
A lot of watching pupils	4
A moderate amount of watching pupils	3
A slight amount of watching pupils	2
Little or no watching pupils	1

2. Supervising pupils in a classroom test
   In a public school classroom during a test most teachers would do:

A great deal of supervising pupils	5
A lot of supervising pupils	4
A moderate amount of supervising pupils	3
A slight amount of supervising pupils	2
Little or no supervising pupils	1

3. Singing during a classroom singing period
   In a public school classroom during a singing period most teachers would do:

A great deal of singing with pupils	5
A lot of singing with pupils	4
A moderate amount of singing with pupils	3
A slight amount of singing with pupils	2
Little or no singing with pupils	1

4. Ignoring pupils misbehaving in a classroom
In a public school classroom while pupils are misbehaving most teachers would do:

A great deal of ignoring pupils misbehavior	5
A lot of ignoring pupils misbehavior	4
A moderate amount of ignoring pupils mis...	3
A slight amount of ignoring pupil mis...	2
Little or no ignoring pupil misbehavior	1

5. Keeping pupils quiet in the library
In a public school library most teachers would do:

A great deal of keeping pupils quiet	5
A lot of keeping pupils quiet	4
A moderate amount of keeping pupils quiet	3
A slight amount of keeping pupils quiet	2
Little or no keeping pupils quiet	1

6. Speaking out at PTA meeting in the auditorium
In a public school auditorium during a PTA meeting most teachers would do:

A great deal of speaking out	5
A lot of speaking out	4
A moderate amount of speaking out	3
A slight amount of speaking out	2
Little or no speaking out	1

7. Policing the halls
In the public school halls most teachers would do:

A great deal of policing	5
A lot of policing	4
A moderate amount of policing	3
A slight amount of policing	2
Little or no policing	1

8. Disciplining pupils during basketball game in gym
In the public school gym during a basketball game most teachers would do:

A great deal of disciplining pupils	5
A lot of disciplining pupils	4
A moderate amount of disciplining pupils	3
A slight amount of disciplining pupils	2
Little or no disciplining pupils	1

9. Visiting with other teachers on playground
On a public school playground most teachers would do:

A great deal of visiting with teachers	5
A lot of visiting with teachers	4
A moderate amount of visiting with teachers	3
A slight amount of visiting with teachers	2
Little or no visiting with teachers	1

10. Cooperating with other teachers in school
In a public school most teachers would do:

A great deal of cooperating with teachers	5
A lot of cooperating with teachers	4
A moderate amount of cooperating with...	3
A slight amount of cooperating with...	2
Little or no cooperating with teachers	1

Form B

11. Visiting with other teachers during study period
During a public school study period most teachers would do:

A great deal of visiting with other teachers	5
A lot of visiting with other teachers	4
A moderate amount of visiting with other...	3
A slight amount of visiting with other...	2
Little or no visiting with other teachers	1

12. Watching for cheaters during a classroom test
In a public school classroom during a test most teachers would do:

A great deal of watching for cheaters	5
A lot of watching for cheaters	4
A moderate amount of watching for cheaters	3
A slight amount of watching for cheaters	2
Little or no watching for cheaters	1

13. Having pupils sing solos during a classroom singing period
In a public school classroom during a singing period most teachers would do:

A great deal of singing of solos by pupils	5
A lot of singing of solos by pupils	4
A moderate amount of singing of solos by...	3
A slight amount of singing of solos by...	2
Little or no singing of solos by pupils	1

14. Telling misbehaving pupils in the classroom to stop talking
In a public school classroom while pupils are misbehaving most teachers would do:

A great deal of telling to stop talking	5
A lot of telling to stop talking	4
A moderate amount of telling to stop talk..	3
A slight amount of telling to stop talking	2
Little or no telling to stop talking	1

15. Doing own studying and grading in the library
In the public school library most teachers would do:

A great deal of studying and grading	5
A lot of studying and grading	4
A moderate amount of studying and grading	3
A slight amount of studying and grading	2
Little or no studying and grading	1

16. Attending PTA meetings in the auditorium
In the public school auditorium most teachers would do:

A great deal of attending PTA meetings	5
A lot of attending PTA meetings	4
A moderate amount of attending PTA meetings	3
A slight amount of attending PTA meetings	2
Little or no attending PTA meetings	1

17. Allowing pupils to explore during experiments in the laboratory
In a public school laboratory during experiments most teachers would do:

A great deal of allowing to explore in ex..	5
A lot of allowing to explore in experiments	4
A moderate amount of allowing to explore...	3
A slight amount of allowing to explore...	2
Little or no allowing to explore in experi..	1

18. Kibitzing during basketball game in gym
In the public school gym during a basketball game most teachers would do:

A great deal of Kibitzing during game	5
A lot of kibitzing during game	4
A moderate amount of kibitzing during game	3
A slight amount of kibitzing during game	2
Little or no kibitzing during game	1

19. Supervising on playground
On a public school playground most teachers would do:

A great deal of supervising on playground	5
A lot of supervising on playground	4
A moderate amount of supervising on...	3
A slight amount of supervising on ...	2
Little or no supervising on playground	1

20. Cooperating with the principal in school
In a public school most teachers would do:

A great deal of cooperating with principal	5
A lot of cooperating with principal	4
A moderate amount of cooperating with...	3
A slight amount of cooperating with...	2
Little or no cooperating with principal	1

Form C

21. Reading own books during study period
During a public school study period most teachers would do:

A great deal of reading own books	5
A lot of reading own books	4
A moderate amount of reading own books	3
A slight amount of reading own books	2
Little or no reading own books	1

22. Leaving the room during a classroom test
In a public school classroom during a test most teachers would do:

A great deal of leaving the classroom... 5
A lot of leaving the classroom during a test 4
A moderate amount of leaving the classroom..3
A slight amount of leaving the classroom... 2
Little or no leaving the classroom during...1

23. Grading papers during a classroom singing period
In a public school classroom during a singing period most teachers would do:

A great deal of grading papers 5
A lot of grading papers 4
A moderate amount of grading papers 3
A slight amount of grading papers 2
Little or no grading papers 1

24. Threatening pupils misbehaving in the classroom
In a public school classroom while pupils are misbehaving most teachers would do:

A great deal of threatening the pupils 5
A lot of threatening the pupils 4
A moderate amount of threatening the pupils 3
A slight amount of threatening the pupils 2
Little or no threatening the pupils 1

25. Choosing books for pupils in the classroom
In the public school library most teachers would do:

A great deal of choosing books for pupils 5
A lot of choosing books for pupils 4
A moderate amount of choosing books for... 3
A slight amount of choosing books for... 2
Little or no choosing books for pupils 1

26. Visiting with parents during PTA meetings in the auditorium
In the public school auditorium during a PTA meeting most teachers would do:

A great deal of visiting with parents 5
A lot of visiting with parents 4
A moderate amount of visiting with parents 3
A slight amount of visiting with parents 2
Little or no visiting with parents 1

27. Being partisan during football game on athletic field
On the public school athletic field during a football game most teachers would do:

A great deal of being partisan during game	5
A lot of being partisan during game	4
A moderate amount of being partisan during..	3
A slight amount of being partisan during...	2
Little or no being partisan during game	1

28. Doing menial tasks during basketball game in gym
In the public school gym during a basketball game most teachers would do:

A great deal of menial tasks during game	5
A lot of menial tasks during game	4
A moderate amount of menial tasks during...	3
A slight amount of menial tasks during game	2
Little or no menial tasks during game	1

29. Disciplining pupils in the cafeteria
In the public school cafeteria most teachers would do:

A great deal of disciplining pupils	5
A lot of disciplining pupils	4
A moderate amount of disciplining pupils	3
A slight amount of disciplining pupils	2
Little or no disciplining pupils	1

30. Participating in community activities out of school
While not on the job most teachers would do:

A great deal of participating in activities	5
A lot of participating in activities	4
A moderate amount of participating in...	3
A slight amount of participating in...	2
Little or no participating in activities	1

Appendix B

A Random Selection of Interitem Correlations for Own Cognitions*

Form A

	1	2	3	4	5	6	7	8	9	10
1	X			.04[a]		.13[a]		-.11		
2		X					.05[a]		.11[a]	-.04
3			X	-.02			-.05[a]	.18[a]		
4				X		.01				
5					X					
6						X		.08	.18[a] .00	
7							X			-.08
8								X	-.09	
9									X	
10										X

(Appendix B to be continued)

*Note: The small a indicates that the items involved were "own" norms (page 5), no small a indicates that the items were own expectations (page 1). Fifteen sample items were selected for each Form; the type of cognition and specific item numbers were selected randomly.

Form B

	11	12	13	14	15	16	17	18	19	20
11	X	.22[a]			-.02	.01			.05	
12		X			-.16	-.04		.03[a]		
13			X				.08			
14				X				.14[a]		.07[a]
15					X		-.03		.13	
16						X				.08
17							X		-.12	
18								X		-.12
19									X	
20										X

Form C

	21	22	23	24	25	26	27	28	29	30
21	X				-.02[a]			.11	.15[a]	
22		X	.00[a]				.08[a]			-.09[a]
23			X	.17			-.03	.27		
24				X						.16[a]
25					X		.04[a] -.06		-.05	
26						X				
27							X			.62[a]
28								X		
29									X	.14
30										X

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